CHAPTER 1

Introducing the Content Router 4430

This chapter provides a basic functional overview of the Content Router 4430 and describes the Content Router 4430 hardware, major components, and front and back panel indicators and controls.

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Introduction

Cisco Content Routers are the content routing elements of a larger, Cisco Content Delivery Network (CDN) solution, which includes content switching, content distribution and delivery, content services, and content management, as well as content routing. The Content Router 4430 (CR-4430) is deployed at strategic locations within your network and operates in conjunction with Content Engines to redirect DNS requests to optimal Content Engines based on network proximity; presence of requested content; current Content Engine status, including load and availability; and current network conditions, including load.

System Hardware Features

The Content Router 4430 is configured for AC-input power. The default factory configuration comes with one power supply installed. The Content Router 4430 has one internal 18-gigabyte (GB) Ultra2 LVD SCSI hard drive. For network connections, the Content Router 4430 has two 10/100BASE-T Ethernet/Fast Ethernet ports with RJ-45 receptacles. Port Ethernet 0 supports autodetect speed mode and full-duplex operation. The second port (Ethernet 1) is currently not supported.

Table 1-1 lists the storage and memory specifications for the Content Router 4430.

Table 1-1 Storage and Memory Specifications

Specification	Description
Internal hard disk storage	1 18-GB Ultra2 LVD SCSI hard drive
Memory	16-MB Flash memory 1-GB SDRAM

Figure 1-1 shows the Content Router 4430 front panel. Figure 1-2 shows the rear panel with one AC power supply.

Figure 1-1 Content Router 4430—Front Panel

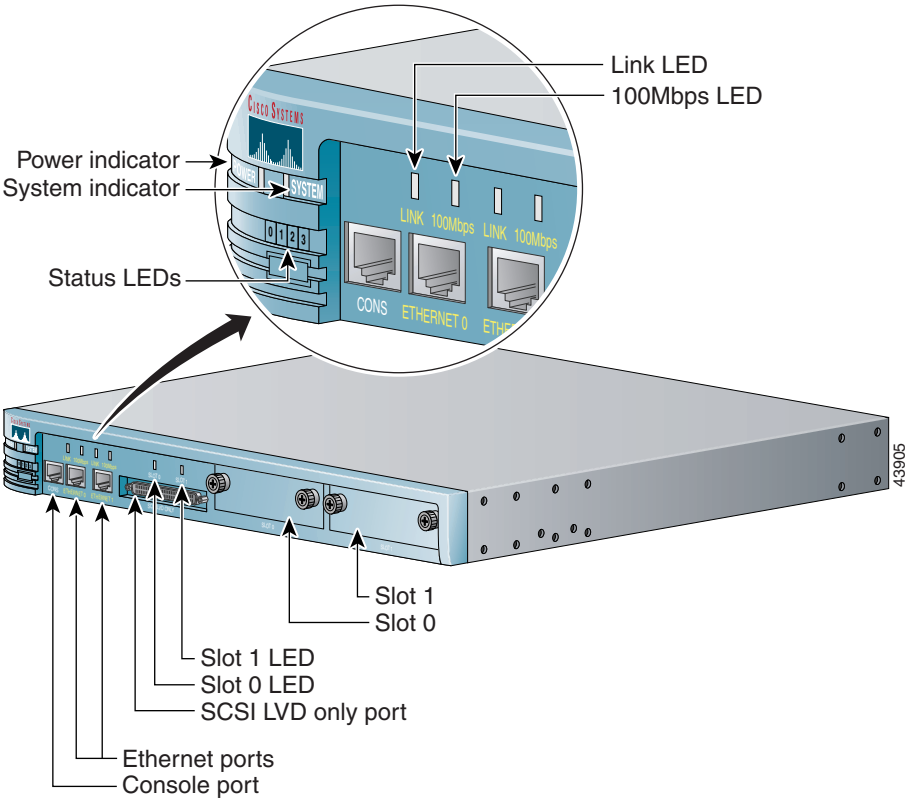
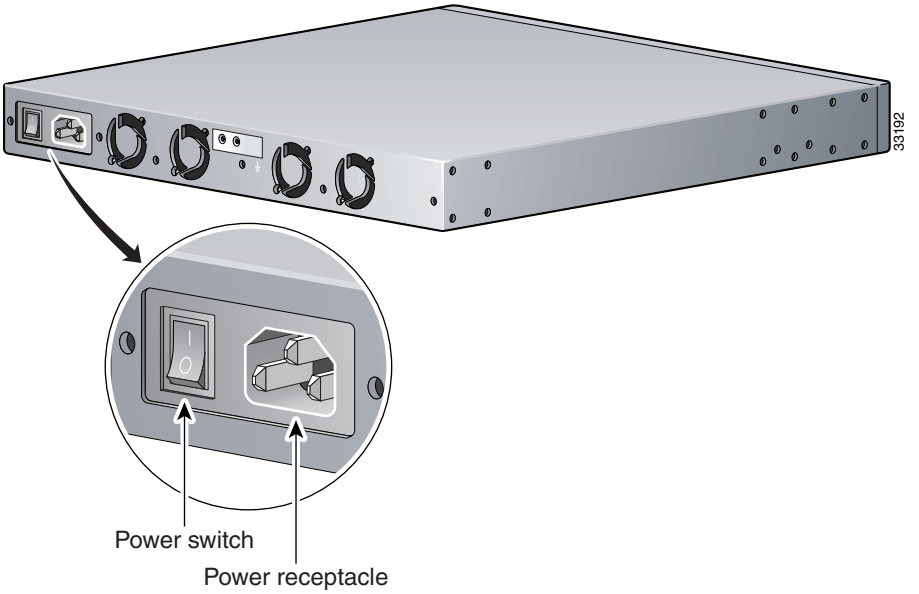


Figure 1-2 Content Router 4430—Back Panel



Ports, Receptacles, and LEDs

Table 1-2 describes the front and back panel ports and receptacles. (See the front panel in Figure 1-1 and the back panel in Figure 1-2.)

Table 1-2 Ports and Receptacles

Item	Description
Front Panel	
CONS port	This serial port connects to a console.
ETHERNET 0 port	The Ethernet cable connects to this port.
ETHERNET 1 port	This port is currently not supported.
SCSI LVD only port	This port is not supported on the CR-4430.

Table 1-2 Ports and Receptacles (continued)

Item	Description
Slot 0	Bay for hard drive 0.
Slot 1	Bay not used.
Back Panel	
Power receptacle	The power cord connects to this plug.
Power switch	This switch toggles between on and off, even though the switch always returns to its initial position after you press it. A power light on the front panel, when lit, indicates that the power is on.

Warning **To avoid electric shock, do not connect safety extra-low voltage (SELV) circuits to telephone-network voltage (TNV) circuits. LAN ports contain SELV circuits, and WAN ports contain TNV circuits. Some LAN and WAN ports both use RJ-45 connectors. Use caution when connecting cables.**

Table 1-3 describes the LEDs on the front panel.

Table 1-3 LEDs

Indicator	Color	State	Description
Power	Green	On	Power is flowing to the Content Router.
System	Green	On	The network connection is active (packets are being sent or received).
LINK	Green	On	The Content Router is connected to the network.
100 Mbps	Green	On	The connection is a 100BASE-TX (Fast Ethernet) connection.
Slot 0	Green	On	Slot 0 is active.
Slot 1	Green	On	Slot 1 is active.

Table 1-3 LEDs (continued)

Indicator	Color	State	Description
Status 0 1 2 3 LEDs	Green	Steady	In a steady display, the state of each LED is constant. (See Table 3-1 for the meanings of steady-state LED variations.)
		Rolling	Reboot has begun. In a rolling display, the four LEDs give the appearance of a light that repeatedly moves from left to right.

Cables and Connectors

This section describes the cables and connectors that connect your Content Router 4430 to a terminal and to the external network.

Console Cable

The Content Router 4430 comes with a console cable kit that includes the following cable and adapters:

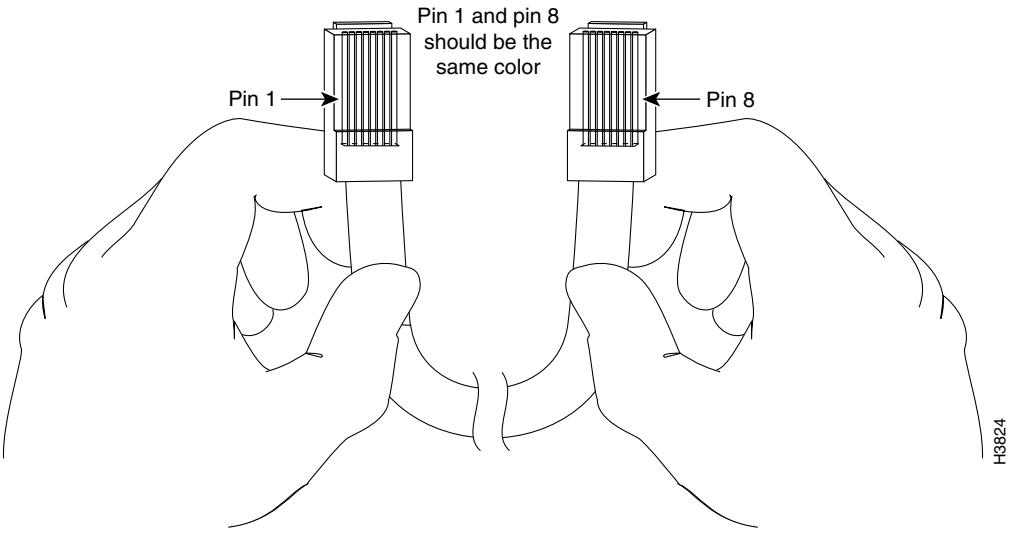
- One RJ-45 to RJ-45 rollover cable
- Two RJ-45 to DB-9 adapters

Use the rollover cable to connect the Content Router 4430 console port to the COM port of an ASCII terminal or a PC running terminal emulation software. The console port on the Content Router 4430 is configured as data terminal equipment (DTE) and uses an RJ-45 connector.

By attaching an RJ-45 to DB-9 adapter to the rollover cable, you create an RJ-45 to DB-9 null modem cable.

You can identify a rollover cable by comparing the two modular ends of the cable, as shown in Figure 1-3. Holding the cable ends in your hands side by side with the tab at the back, the wire connected to the pin on the outside of the left connector (pin 1) should be the same color as the pin on the outside of the right connector (pin 8).

Figure 1-3 Identifying a Rollover Cable



Network Cables

An Ethernet cable is required to connect the Content Router 4430 to your network. To connect the Content Router 4430 to your network, you must use one of the following types of cables:

- Unshielded twisted-pair (UTP) straight-through cable with RJ-45 connectors to connect the Content Router 4430 to a Medium Dependent Interface-crossover (MDI-X) port
- RJ-45 to RJ-45 crossover cable to connect the Content Router 4430 to another MDI port

Note The Ethernet ports on the Content Router 4430 are MDI.

Use a Category 5 UTP cable to connect to a 100BASE-T network.

Ethernet Cable Pinouts

The following pinout information for common cable configurations can assist you in purchasing or building replacement cables.

Table 1-4 shows the pinout for a straight-through 100BASE-T cable.

Table 1-4 Straight-Through 100BASE-T Cable Pinout

RJ-45 Pin	Signal	RJ-45 Pin
1	TX+	1
2	TX–	2
3	RX+	3
4	—	4
5	—	5
6	RX–	6
7		7
8		8

Table 1-5 shows the pinout for a crossover 100BASE-T cable.

Table 1-5 Crossover 100BASE-T Cable Pinout

RJ-45 Pin	Signal	RJ-45 Pin
1	TX+	3
2	TX–	6
3	RX+	1
4		4
5		5
6	RX–	2
7		7
8		8

Specifications

Table 1-6 lists hardware specifications for the Content Router 4430 hardware.

Table 1-6 Specifications

Specification	Description
Dimensions	Height: 1.72 in. (4.37 cm) Width: 17.5 in. (44.45 cm) Depth: 14.13 in. (35.8 cm)
Weight	12.5 lb (5.7 kg)
AC power	• Universal input: 100–127 VAC 200–240 VAC • Frequency: 50–60 Hz • Maximum power: 130W • Current: 120 VAC input with PFC (power factor correction), 1.0A 230 VAC input with PFC (power factor correction), 0.5A
Maximum station-to-station cabling distances	10/100BASE-TX Ethernet, Category 5 UTP: 328 ft (100 m)
Placement	Rack-mounted, mid, front, or back (standard 19-in. [48.26-cm] and 23-in. [58.42-cm] racks)
Temperature	Operating: 32 to 104°F (0 to 40°C) Nonoperating: –13 to 158°F (–25 to 70°C)
Humidity (operating)	5 to 95%, noncondensing
Altitude (operating)	6500 ft (2000 m) at 104°F (40°C)
Shock (operating)	5 G at 11 ms duration, half sine shock pulse

Regulatory Compliance

Table 1-7 lists regulatory compliance for the Content Router 4430.

Table 1-7 Regulatory Compliance

Item	Description
Compliance	CE Marking
Safety	UL 1950
	CSA-C22.2 No. 950
	EN 60950
	IEC 60950
EMC	FCC Part 15 (CFR 47) Class A
	ICES-003 Class A
	EN 55022 Class A
	CISPR22 Class A
	AS/NZ 3548 Class A
	VCCI Class A
	EN 55024

Class A Warning Statements

Japan VCCI

This is a Class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective actions.

この装置は，情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＡ情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

Taiwan BSMI

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

這是甲類資訊產品，在居住環境中使用時，可能會造成射頻干擾，
在這種情況下，使用者會被要求採取某些適當的對策。

Hungary Class A Warning Notice

This equipment is a Class A product and should be used and installed properly according to the Hungarian EMC Class A requirements (MSZ EN 55022). Class A equipment is derived for typical commercial establishments for which special conditions of installation and protection distance are used.

Warning **Figyelmeztetés a felhasználói kézikönyv számára:**
Ez a berendezés “A” osztályú termék, felhasználására és üzembe helyezésére a magyar EMC “A” osztályú követelményeknek (MSZ EN 55022) megfeleloen kerülhet sor, illetve ezen “A” osztályú berendezések csak megfelelo kereskedelmi forrásból származhatnak, amelyek biztosítják a megfelelo speciális üzembe helyezési körülményeket és biztonságos üzemelési távolságok alkalmazását.